

Utah State University

DigitalCommons@USU

Educational Policies Committee

Faculty Senate

4-2-2020

Curriculum Subcommittee Agenda, April 2, 2020

Utah State University

Follow this and additional works at: https://digitalcommons.usu.edu/fs_edpol

Recommended Citation

Utah State University, "Curriculum Subcommittee Agenda, April 2, 2020" (2020). *Educational Policies Committee*. Paper 1024.

https://digitalcommons.usu.edu/fs_edpol/1024

This Curriculum Subcommittee Agenda is brought to you for free and open access by the Faculty Senate at DigitalCommons@USU. It has been accepted for inclusion in Educational Policies Committee by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.



CURRICULUM SUBCOMMITTEE AGENDA

2 April 2020

A meeting of the Curriculum Subcommittee of the Educational Policies Committee will be held on 2 April 2020 at 2:00 pm in Old Main 136 (Champ Hall Conference Room).

1. *Approval of 27 February 2020 Minutes*

2. *Program Proposals*

Request from the School of Applied Sciences, Technology and Education in the College of Agriculture and Applied Sciences to create [three emphasis areas within the Outdoor Product Design and Development Program](#).

Request from the Department of Aviation and Technical Education in the College of Agriculture and Applied Sciences to [offer a Bachelor of Science in Aviation Technology](#).

Request from the Department of Landscape Architecture and Environmental Planning in the College of Agriculture and Applied Sciences to [create a certificate in Advanced Design, Geospatial, and Visualization Technologies](#).

Request from the Department of Landscape Architecture and Environmental Planning in the College of Agriculture and Applied Sciences to [change the degree name from Masters of Bioregional Planning to Masters of Environmental Planning](#).

Request from the Department of Landscape Architecture and Environmental Planning in the College of Agriculture and Applied Sciences to [change the degree name from PhD in Landscape Architecture to PhD in Landscape Architecture and Environmental Planning](#).

Request from the Department of Languages, Philosophy and Communications Studies in the College of Humanities and Social Sciences to [create a certificate of proficiency in Nonprofit Organizations and Social Entrepreneurship](#).

Request from the Department of Environment and Society in the S.J. & Jessie E. Quinney College of Natural Resources to [offer a certificate of proficiency in Applied Geographic Information Science](#).

3. *Semester Course Approval Reviews*

<https://usu.curriculog.com/>

College of Agriculture and Applied Sciences

ADVS = 1

APEC =

APPR =

ASTE = 2

AVTE = 7

LAEP = 1

NDFS =

OPDD =

PSC = 3

Caine College of the Arts

ART = 1

MUSC = 6

THEA =

CCA =

Jon M. Huntsman School of Business

ACCT = 5

BUS =

ECN =

MGT =

MSLE = 1

MIS = 6

Emma Eccles Jones College of Education and Human Services

COMD =

EDUC =

HDFS = 1

KHS = 15

ITLS = 1

NURS =

PSY = 7

SPED = 4

TEAL = 10

College of Engineering

BENG = 2

CEE =

ECE =

EED =

MAE =

ENGR = 1

College of Humanities and Social Sciences

ENGL = 3

HIST = 3

JCOM = 2

LPCS = 7

POLS =

SSWA = 9

IELI =

CHSS =

WGS =

S.J. & Jessie E. Quinney College of Natural Resources

ENVS = 8

WATS = 4

WILD = 1

NR =

College of Science

BIOL = 1

CHEM =

CS =

GEOL =

MATH =

PHYS =

PUBH =

SCI =

HONR =

ISTU =

UN –CAS =

USU = 1

4. ***Other Business***

[Caine College of the Arts CIP Codes](#)

Appoint committee chair for the 2020-2021 academic year.

Adjourn:

CURRICULUM SUBCOMMITTEE MINUTES 27 February 2020

A meeting of the Curriculum Subcommittee of the Educational Policies Committee was held on 27 February 2020 at 2:00 pm in AGRS-412 (Luke Conference Room).

Present: Nicholas Morrison, Chair, Caine College of the Arts
Brian Warnick, College of Agriculture and Applied Sciences
Scott Hunsaker, Emma Eccles Jones College of Education and Human Services
Thomas Fronk, College of Engineering
Claudia Radel, S.J. & Jessie E. Quinney College of Natural Resources
Greg Podgorski, College of Science
Robert Heaton for Rachel Wishkoski, University Libraries
Matt Sanders, College of Humanities and Social Sciences
Dexton Lake, Executive Vice President
Paul Barr, Provost's Office
Michele Hillard, Secretary
Adam Gleed, Registrar's Office
Chenese Boyle, Program Coordinator
Toni Gibbons, DegreeWorks
Merideth Thompson, Jon M. Huntsman School of Business
Robyn Peterson, Catalog Editor
Harrison Kleiner, Gen Ed Assessment

Absent: Sami Ahmed, President USUSA
Richard Inouye, Graduate Council
Jared Fry, Graduate Senator
Scott Henrie, USU Eastern
Mark Chynoweth, Statewide Campuses

Visitors: N/A

1. *Approval of 6 February 2020 Minutes*

Motion to approve the 6 February Minutes made by Merideth Thompson. Seconded by Greg Podgorski. Minutes approved as distributed.

2. *Program Proposals*

Request from the School of Teacher Education and Leadership in the Emma Eccles Jones College of Education and Human Services [to add Science Education as a specialization to the existing Master of Education in Curriculum and Instruction](#).

Motion to approve the R401 proposal made by Merideth Thompson. Seconded by Thomas Fronk. Proposal approved.

Request from the School of Teacher Education and Leadership in the Emma Eccles Jones College of Education and Human Services [to add Science Education as a specialization to the existing Master of Science in Curriculum and Instruction](#).

Motion to approve the R401 proposal made by Greg Podgorski. Seconded by Matt Sanders. Proposal approved.

3. *Semester Course Approval Reviews*

<https://usu.curriculog.com/>

College of Agriculture and Applied Sciences

Motion to approve the business of the College of Agriculture and Applied Sciences made by Brian Warnick. Seconded by Dexton Lake. Business approved.

ADVS = 3

APEC =

APPR =

ASTE = 7

AVTE = 10

LAEP = 2

NDFS = 3

OPDD = 12

PSC = 1

Caine College of the Arts

Motion to approve the business of the Caine College of the Arts made by Matt Sanders. Seconded by Merideth Thompson. Business approved.

ART = 1

MUSC = 16

THEA = 2

CCA =

Jon M. Huntsman School of Business

Motion to approve the business of the Jon M. Huntsman School of Business made by Merideth Thompson. Seconded by Greg Podgorski. Business approved.

ACCT = 14

BUS =

ECN = 21

MGT = 26

MSLE = 41

MIS = 24

Emma Eccles Jones College of Education and Human Services

Motion to approve the business of the Emma Eccles Jones College of Education and Human Services made by Brian Warnick. Seconded by Robert Heaton. Business approved.

COMD = 1

EDUC =

HDFS =

KHS =

ITLS = 2

NURS =

PSY =

SPED = 1

TEAL = 6

College of Engineering

Motion to approve the business of the College of Engineering made by Thomas Fronk. Seconded by Brian Warnick. Business approved.

BENG = 8

CEE = 2

ECE = 4

EED =

MAE =

ENGR =

College of Humanities and Social Sciences

Motion to approve the business of the College of Humanities and Social Sciences made by Matt Sanders. Seconded by Greg Podgorski. Business approved.

ENGL = 10

HIST = 1

JCOM = 11

LPCS = 8

POLS = 4

SSWA = 4

IELI =

CHSS =

WGS =

S.J. & Jessie E. Quinney College of Natural Resources

Motion to approve the business of the S.J. & Jessie E. Quinney College of Natural Resources made by Claudia Radel. Seconded by Matt Sanders. Business approved.

ENVS = 1

WATS =

WILD =

NR =

College of Science

Motion to approve the business of the College of Science made by Greg Podgorski. Seconded by Dexon Lake. Business approved.

BIOL = 2

CHEM = 8

CS = 6

GEOL =

MATH =

PHYS =

PUBH =

SCI =

HONR =

ISTU =

UN –CAS =

USU = 5

Motion to approve the USU business made by Paul Barr. Seconded by Matt Sanders. Business approved.

4. *Other Business*

College of Agriculture and Applied Sciences CIP Code Requests

Motion to approve the updated CIP Codes made by Brian Warnick. Seconded by Claudia Radel. Codes approved.

Colleges are reporting their Undergraduate Teaching Fellows (UTF) positions. Assignment will be sent out soon.

Definition of substantive vs. non-substantive changes is being reviewed. Looking at having these definitions and reviews being conducted by next year. As part of the checklist on these changes we will have to have info to see if these changes will impact another college/department.

Talking about timelines and deadlines. Discussed with Dean's Council, President's Council and EPC. Work over the summer to outline a one-page deadline/timeline that can be linked in Curriculog.

Adjourn: 2:55 pm

College of Agriculture and Applied Sciences - School of Applied Sciences, Technology and Education

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Agriculture and Applied Sciences

DEPARTMENT (include all cross listed departments)*

School of Applied Sciences, Technology and Education

Current Title (if applicable)

Proposed Title Creating Emphases in the Outdoor Product Design and Development Program

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) 190902 *

Minimum Number of Credits (if applicable)* 120

Maximum Number of Credits (if applicable)* 126

Type of Degree: (BA, BS, etc.)* BS

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☐ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☒ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☐ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)

Additional Approvals (if applicable)

Graduate Council* ☐ Yes
☒ No

Council on Teacher Education* ☐ Yes
☒ No

Section I: The Request**R401 Purpose***

The purpose of this proposal is to create three emphasis areas within the Outdoor Product Design and Development (OPDD) program for Design, Development, and Product Line Management. Due to the growth in the field, as identified by our industrial partners and the Department of Workforce Services (DWS), three emphasis areas have been identified to meet more of the breadth of jobs in the outdoor and product related industries. These additional emphases will help further develop the business and manufacturing ends of the design field for the students and prospective students investigating the OPDD program. The proposal allows the OPDD program to service more students, produce graduates with more placement opportunities, and meet the workforce demands of industry.

Section II: Program Proposal

Proposed Action & Rationale*

This proposal creates emphases in the Outdoor Product Design and Development (OPDD) program for Design, Development, and Product Line Management due to the growth in the field and workforce shortage, as identified by the Department of Workforce Services (DWS) and by our industrial advisory board. These emphasis areas consist of 16-credit concentrations in Design (12 credits of studio courses and 4 credits of technical electives), Development (16 credits from the Operations Management program in the Huntsman School of Business), and Product Line Management (16 credits from the Marketing program in the Huntsman School of Business). These courses will provide a strong foundation of the skills the students will need to be successful in their related careers.

Labor Market Demand (if applicable)

Our industry partners in an advisory council have indicated a strong need for us to provide these emphases. Students who are entering the OPDD have also expressed a desire to focus on either the manufacturing or product management end of design. The Department of Workforce Services (DWS) has projected an increase in the workforce demand in the different areas of the outdoor industry.

Consistency with Institutional Mission & Institutional Impact*

As a land grant institution, the mission of the University is to serve the public through learning, discovery, and engagement. The new emphases in the Outdoor Product Design and Development (OPDD) program will provide students with the opportunities to learn valuable skills relevant to the needs of industry throughout the state. The additional emphases will also allow greater collaboration with the outdoor industry in the state. They will create new relationships to different companies and positions that were not accessible before, providing more internship and collaborative projects between the students and the industry they seek to work in.

Finances*

The courses for the proposed Design emphasis are already being taught as part of the current OPDD program. There would be no additional financial requirements. The Development emphasis will be taught through the Operations Management program within the Huntsman School of Business and will add no financial obligations to either program. The partnership between the Operations Management program is outlined in the attached letter from the department head of the program. The Product Line Management emphasis will be taught through the Marketing program within the Huntsman School of Business and will add no financial obligations to either program. The partnership between the Marketing program is outlined in the attached letter from the department head of the program. Thus, the addition of the emphases benefits all the programs involved to help fill classes and provide degrees to more students without adding financial obligations.

Section III: Curriculum (if applicable)

**Program Curriculum
Narrative**

The three emphases (Design, Development, and Product Line Management) will follow the existing prescribed coursework for the OPDD degree with the following concentrations being introduced in the last two years of coursework:

Design Emphasis:

- OPDD 3400: Color Theory & Design
- OPDD 3760: Outdoor Product Design and Development Studio I
- OPDD 3770: Outdoor Product Design and Development Studio II
- OPDD 4440: Aesthetics, Human Factors, and Brand Image
- OPDD 4750: Senior Design Studio I
- OPDD 4760: Senior Design Studio II
- OPDD 4770: Senior Exhibit

Development Emphasis:


- STAT 2300: Business Statistics (QL)
- ASTE 4900: Senior Project Research and Creative Opportunity
- FIN 3200: Financial Management
- MGT 3600: Project Management
- MGT 3700: Operations Management
- MGT 4600: Negotiations
- MGT 4720: Sales and Operations Planning
- MGT 4790: Managing Global Value Chains
- MGT 5730: Lean Continuous Improvement
- MIS 1100: Excel for Business Analysis
- MIS 2100: Data and Information in Business

Product Line Management Emphasis:

- ASTE 4900: Senior Project Research and Creative Opportunity
- OPDD 3400: Color Theory & Design


- OPDD 4440: Aesthetics, Human Factors, and Brand Image
- FIN 3200: Financial Management
- MIS 1100: Excel for Business Analysis
- MIS 2100: Data and Information in Business
- MSLE 3500: Fundamentals of Marketing
- MSLE 3855: Sustainability Marketing
- MSLE 4510: Consumer Behavior
- MSLE 4532: Data Driven Decision Making
- MSLE 4533: Big Market Insights from Big Data
- MSLE 4590: Marketing Strategy

Attached to this proposal is the proposed 4 year plan for each of the emphases for reference.

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

College of Agriculture and Applied Sciences - Aviation and Technical Education

4.1.b R401 Full Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Complete the R401 Full Template which can be downloaded from the following location: <http://www.usu.edu/epc/forms/>.

Step 3: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Agriculture and Applied Sciences


DEPARTMENT (include all cross listed departments)*

Aviation and Technical Education

Additional Approvals (if applicable)


Graduate Council* ☐ Yes
☒ No

Council on Teacher Education* ☐ Yes
☒ No

Step 4: Attach completed R401 Full Template to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 5: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

**Utah System of Higher Education
Utah State University
New Academic Program Proposal**

Institution Submitting Request:	Utah State University
Proposed Program Title:	Aviation Technology – Aviation Management <ul style="list-style-type: none">- Unmanned Aerial Systems emphasis- Aviation Operations emphasis
Program Type:	BS
Sponsoring School, College, or Division:	College of Agriculture and Applied Sciences
Sponsoring Academic Department(s) or Unit(s):	Aviation and Technical Education
Classification of Instructional Program Code:	490101
Min/Max Credit Hours Required to Earn Degree:	120 / 120
Proposed Beginning Term:	Spring 2021
University Curriculum Committee Approval Date:	
Institutional Board of Trustees' Approval Date:	

Utah System of Higher Education Program Description – Full Template

Section I: The Request

Utah State University requests approval to offer the following Baccalaureate degree:

Aviation Technology – Aviation Management

Effective Spring 2021

This program was approved by the institutional Board of Trustees on _____.

Section II: Program Proposal

Program Description

Present a complete, formal program description.

The Bachelor of Science in Aviation Technology – Aviation Management prepares graduates for many different careers in the aviation profession. Career opportunities in public and private sectors include airlines, airports, military and general aviation, federal agencies and self-employment opportunities. Specific jobs related to an Aviation Management degree include airline operations, airport management, aviation research, marketing, education, safety operations, air traffic control, airline cabin operations, airline dispatch, project management, unmanned aerial systems (UAS) and emerging related fields. Program delivery will include specific training and education for Federal Aviation Administration (FAA) certifications and the knowledge and skills required for industry requirements.

Consistency with Institutional Mission

Explain how the program is consistent with the institution's Regents-approved mission, roles, and goals. Institutional mission and roles may be found at higheredutah.org/policies/policy312/.

This new degree supports the mission of Utah State University by delivering graduates that are employed locally and across the nation to meet industry needs in aviation technology. The growing aviation program has expanded to Eastern Utah in support of the land-grant mission, and the change in degree will enable students to be more employable in new emerging technologies in unmanned aerial systems. The aviation program has formal, and informal relationships with SkyWest Airlines, Envoy Air, Republic, Delta Tech Ops, and other local and national employers in the aviation industry requiring specific certifications and experience for employment. This proposed major includes two emphasis areas – Unmanned Aerial Systems; and Aviation Operations.

The aviation program is focused on providing student-centered learning and discovery through focused degrees with learning and discovery in hands-on laboratory experiences on the ground and in the air. As a degree utilizing science, technology, engineering and math (STEM) as the core of its program, students engage with emerging technology, interact with industry professionals and practice the skills required for job placement. Students graduate prepared to contribute to the aviation industry and, through interaction with international students and instructors, prepared for the global market representing diversity of thought and culture and prepared with the education necessary for leadership roles in industry.

Section III: Needs Assessment

Program Rationale

Describe the institutional procedures used to arrive at a decision to offer the program. Briefly indicate why such a program should be initiated. State how the institution and the USHE benefit by offering the proposed program.

Utah State University has offered aviation courses since 1939, over 80 years of providing formal training for aviation professions. The aviation program currently offers an AAS, BS and MAS degrees, as well as a minor in small UAS. With Westminster College closing their aviation programs, and Salt Lake Community College offering only a maintenance program, there is a need for an Aviation Management degree in Utah. The rapidly emerging field of unmanned systems justifies a separate emphasis area in a new degree. Over 480 students have taken UAS courses within the minor offering in the past two years, with nearly 50 entering or completing the new minor. Other departments and programs at USU have requested additional courses in UAS technologies, such as geospatial information systems, which can be incorporated into this new degree. Combining these into a new degree is the logical solution to achieve all three goals.

The addition of this degree program to aviation will provide opportunities for students pursuing careers in the aviation industry outside of our current focus on becoming a commercial pilot and maintenance technician/manager. The department currently offers bachelor's degrees focused on becoming FAA certified commercial pilots, and FAA certified maintenance professionals. The Aviation Management core courses will utilize the majority of existing aviation program courses. The Aviation Operations emphasis will rely upon existing relationships to interdisciplinary courses in business, environmental science and technical communications. The new emphasis area of UAS will incorporate the existing UAS Minor courses. The northern Utah region will greatly benefit from this program and provide students who are ready to enter industry with the only program of its kind in the region. There is not an existing UAS degree in Idaho, Nevada, Utah, Colorado or Wyoming.

Labor Market Demand

Provide local, state, and/or national labor market data that speak to the need for this program. Occupational demand, wage, and number of annual openings information may be found at sources such as Utah DWS Occupation Information Data Viewer (jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do) and the Occupation Outlook Handbook (www.bls.gov/oco).

Utah Valley University recently provided the following evidence for the need for aviation management degrees in the change from Aviation Administration to Aviation Management Degree:

"The US Bureau of Labor Statistics (BLS) employment forecasts for technical positions in aviation anticipate an annual growth rate of 12-13%. A series of studies by the Federal Aviation Administration in 2011 titled 'The Economic Impact of Civil Aviation' found civil aviation contributes ten million jobs and \$1.3 trillion in economic activity, representing 5.2 percent of the US GDP. In Utah, the estimated 106,385 aviation related jobs and \$11.3 billion economic activity account for 6.5 percent of jobs and 5.7 percent of GDP respectively, placing Utah sixth highest in the US for both categories in the contiguous 48 states with four of the top five states in these categories all in the region (Nevada, Washington, Colorado and Arizona)."

USU identifies the CIP Code 490101 for the new degree: a program that focuses on the general study of aviation and the aviation industry, including in-flight and ground support operations. There is not a specific CIP Code for UAS operations.

The expected growth in the state of Utah for aviation management over ten years is 25-30%, according to long-term Bureau of Labor Statistics, with a median expected wage range of \$71,030-\$73,510, which is over twice the median wage of

\$35,010 in the state of Utah. This growth represents 737 positions every year, with UVU as the only other in-state program current offering a similar degree. Without this new degree option, industry would be forced to source these new positions from outside of the state.

Student Demand

Provide evidence of student interest and demand that supports potential program enrollment. Use Appendix D to project five years' enrollments and graduates. Note: If the proposed program is an expansion of an existing program, present several years enrollment trends by headcount and/or by student credit hours that justify expansion.

A USU student survey conducted in 2016 resulted in many students interested in a new degree in UAS. Based upon research of current programs in the nation, five specific UAS courses were created in preparation for students to enter the career field. These courses include design, controls, sensors, aerial photography and advanced design. The first step of creating a new UAS Minor has validated the justification of drone courses at USU. Since the small UAS Minor inception over the past four semesters, 487 students have enrolled in drone courses, and 271 have completed the FAA Remote Pilot Certification with a 99.5% pass rate. Students were mainly enrolled from areas outside of aviation, including landscape architecture, natural resources, business and journalism, with several graduate students also taking courses.

The Professional Pilot Program has seen enrollment double from 160 in 2014 to 360 in 2019. The department is poised to continue providing opportunities for students, with the anticipated growth of over 100,000 jobs in UAS over the next 10 years. Student interest has resulted in the creation of a new Droneworx club, and students have already been employed by Aggie Air at USU and by Amazon Prime Air as test pilots. USU will be primed to recruit and graduate 25 students a year with the potential to have over 100 students in the major in four years.

Similar Programs

Are similar programs offered elsewhere in the USHE, the state, or Intermountain Region? If yes, identify the existing program(s) and cite justifications for why the Regents should approve another program of this type. How does the proposed program differ from or compliment similar program(s)?

There is one other similar active program in USHE that recently changed from an Aviation Administration to Aviation Management degree in Utah: UVU in 2019. Westminster had only seven graduates from their program in 2018 and is closing its program in spring of 2020. USU has seen the enrollment of its aviation degree-seeking students double, not including the drone minor enrollments. SUU has a related degree, Bachelor of Interdisciplinary Studies, which has a management track in the school of business, but does not focus upon UAS.

This new degree will create a path for students to enter a new emerging market of careers, with the specific skills and broad aviation foundation marketable right after graduation. While the new program will have an option for Aviation Management, similar to the new emphasis area at UVU, the program at USU will have different electives and prepare a stackable degree for the Master of Aviation Science degree at USU, one of only two aviation graduate programs in Utah, Arizona, Colorado, Nevada, Idaho, and Montana—the other being Metro State University in Denver.

Collaboration with and Impact on Other USHE Institutions

Indicate if the program will be delivered outside of designated service area; provide justification. Service areas are defined in higher.utah.gov/policies/policyr315/. Assess the impact the new program will have on other USHE institutions. Describe any discussions with other institutions pertaining to this program. Include any collaborative efforts that may have been proposed.

USU has discussed this program with representatives from other USHE aviation programs and has found no conflicts with other schools as this degree program is unique. There is no other BS degree with a UAS focus in any Utah schools. The new degree will not have any adverse effects on other programs across the USHE system.

USU is using existing courses in the department, including courses in the extremely successful UAS Minor. The Aviation Management degrees at USU, and UVU, follow similar degree paths that both utilize the majority of their existing aviation degree courses already in their catalogs, and industry and market demands allow for both institutions to graduate students with a similar degree.

External Review and Accreditation

Indicate whether external consultants or, for a career and technical education program, program advisory committee were involved in the development of the proposed program. List the members of the external consultants or advisory committee and briefly describe their activities. If the program will seek special professional accreditation, project anticipated costs and a date for accreditation review.

USU has an aviation industry advisory committee which provided input to the proposal to create an aviation management degree with emphasis areas in Aviation Operations and UAS. The committee approved the idea of an aviation management degree in 2016 and supported the new drone degree proposal. The aviation curriculum committee met to review course proposals and a sub-committee was created to create specific courses and objectives. External consultants were utilized from Aggie Air, Wookie Drone and University Aviation Association professionals to further develop the program proposal. Aggie Air, external to the Aviation program but internal to USU, contributed Dr. Cal Coopmans and Nate Hoffer, as well as their director, Dr. Mac McGee. These individuals provided input to the overall program and course flow to include a proposal to first implement a drone minor prior to the full degree to validate and justify the new degree. Members of the industry advisory committee included Jessica Hines from Envoy Air; Tom Davis and Daryl Stahli from Skywest (all USU aviation program alumni), Dave Teggins from the Salt Lake Airport (airport manager) and Richard Jeffs from the FAA. The advisory committee was presented with the update for the program in 2019. The need for other aviation professionals besides pilots and maintenance technicians was emphasized by the SkyWest Chief Pilot in 2019 when he presented the new Cadet Program for our students. Dave Teggins has already offered internships with the Salt Lake Airport as Westminster will no longer have students to fulfill those requirements starting summer of 2020. There is no anticipated separate accreditation for this new degree at this time.

Section IV: Program Details Graduation

Standards and Number of Credits

Provide graduation standards. Provide justification if number of credit or clock hours exceeds credit limit for this program type described in R401-3.11, which can be found at higheredutah.org/policies/R401.

The proposed degree requires 120 credit hours from the following areas: general education courses, 32 credits; university electives, 12 credits; aviation core credits, 13 credits; aviation directed courses, 18 credits; and major emphasis area, 45 credits.

Admission Requirements

List admission requirements specific to the proposed program.

The degree will require the standard aviation program entrance requirements: admitted freshmen in good standing to USU and a 2.5 GPA for transfer from other programs at USU or from other institutions.

Curriculum and Degree Map

Program Curriculum:

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences). Indicate new courses with an X in the appropriate columns. The total number of credit hours should reflect the number of credits required to be awarded the degree. For variable credits, please enter the minimum value in the table for credit hours. Explain variable credit in detail as well as any additional information, in the narrative section below the table.

Course Number	New Course	Course Title	Credit Hours
General Education Courses			
ENGL 1010		Introduction to Writing: Academic Prose (CL1)	3
ENGL 2010		Intermediate Writing: Research Writing in a Persuasive Mode (CL2)	3
PHYS 1800		Physics of Technology (BPS)	4
MATH 1050		College Algebra (QL)	4
PSY 1010		General Psychology (BSS)	3
BAI			3
BCA			3
BLS			3
BHU			3
DHA			3
General Education subtotal:			32
Required Courses			
AV 1100		The Aviation Profession	1
AV 1130		Flight Principles	3
AV 3010		National Airspace, Air Traffic Control, and Airport Administration	3
AV 3120		Aviation Law	3
AV 4280		Aviation Management	3
AV 4300		History of Aviation in America	3
AV 4490		Human Factors in Aviation Safety	3
PSC 2040		Aviation Weather	3
ASTE 3050		Technical and Professional Communications Principles (CI)	3
		Core subtotal	25
		For Aviation Operations emphasis	
AV 2330		Private Pilot Ground School	4
AV 2520		Instrument Pilot Ground School	4
AV 2400		Commercial Ground School	2
AV 5500		Airline Transport Pilot (ATP) Ground School (QI)	4
AV 2160		Aircraft Systems for the Professional Pilot	3
AV 4710		Crew Resource Management (CI)	3

AV 5130	X	Airport Management	3
		Required Course Credit Hour subtotal: Aviation Management – Aviation Operations emphasis	48
		<i>For Unmanned Aerial Systems emphasis</i>	
AV 3500		Introduction to Unmanned Aerial Systems	3
AV 3510		UAS Design, Construction, and Maintenance	3
AV 3520		UAS Sensors, Guidance and Control	3
AV 3535	X	UAS Flight Lab	1-3
AV 3550		UAS Advanced Design & Construction	3
AV 3560		UAS Aerial Photography	3
AV 4660		Flight Senior Project (CI)	3
TEE 2300		Electronic Fundamentals (QI)	4
		Required Course Credit Hour subtotal: Aviation Management – Unmanned Aerial Systems emphasis	48-50
		Required Course Credit Hour subtotal	80-82
Recommended Designated Elective Courses (select a minimum of 18 credits from list below)			
BUSN 1010		Business Principles	3
BUSN 1111		Introduction to Accounting	3
ENVS 1350		Introduction to Environmental Science (BLS)	3
BUSN 2010		Accounting II	3
HDFS 3350		Family Finance (DSS)	3
JCOM 2300		Introduction to Public Relations	3
MGT 3250		Managing Human Capital	2
MGT 3700		Operations Management	2-3
MSLE 3110		Managing Organizations and People (DSS)	3
MSLE 3710		Leading Teams	2
MSLE 3250		Intro to Human Resource Management	3
MGT 3810		Employment Law for Human Resource Professionals	3
MSLE 3800		Leadership	2
ASTE 3100		Personal and Team Leadership	3
AV 3900		Aviation Independent Study	1-3
CMST 1020		Public Speaking (BHU)	3
PUBH 3310		Occupational Health and Safety	3
CMST 2110		Interpersonal Communication (BHU/HR)	3
		Elective Credit Hour Subtotal: Aviation Operations Emphasis	40
		Elective Credit Hour Subtotal: Unmanned Aerial Systems Operations	38-40
Curriculum Total			120

Program Curriculum Narrative

Describe any variable credits. You may also include additional curriculum information.

This major and the associated curriculum are an outgrowth of our existing aviation programs. We have designed the major and two emphases with guidance from our advisory board and with student input from our existing programs. We are proposing the development of two new courses to augment the emphases. An upper-division Airport Management course is proposed in the senior year of the Aviation Operations emphasis and a UAS Flight Lab course is proposed for the UAS emphasis. The Flight Lab course will be designed as repeatable with variable credits to allow for experiences related to different UAS platforms.

Degree Map:

Provide a degree map for proposed program. Degree maps or graduation plans are a suggested semester-by-semester class schedule that includes prefix, number, title, pre-requisites, and semester hours.

Aviation Management – Aviation Operations Emphasis

Fall of First Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 1100	The Aviation Profession		1
AV 1130	Flight Principles		3
BAI			3
BCA			3
MATH 1050 or QL course	College Algebra (QL)		4
Elective			1
	Semester total:		15
Spring of First Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 2330	Private Pilot Ground School	Admission to aviation program	4
ENGL 1010	Introduction to Writing: Academic Prose (CL1)		3
MATH 1060	Trigonometry		2
PSC 2040	Aviation Weather		3
TEE 2300	Electronic Fundamentals (QI)	Any QL course	4
	Semester total:		16

Fall of Second Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 2400	Commercial Ground School	AV 2330	2
BHU			3
ENGL 2010	Intermediate Writing: Research Writing in a Persuasive Mode (CL2)	CL1	3
ENVS 1350	Introduction to Environmental Science (BLS)		3
Elective			4
	Semester total:		15
Spring of Second Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 2520	Instrument Pilot Ground School	AV 2400	4
AV 2160	Aircraft Systems for the Professional Pilot		3
PHYS 1800	Physics of Technology (BPS)		4
BSS			3
	Semester total:		14
Fall of Third Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
ASTE 3050	Technical and Professional Communications (CI)	CL2	3
AV 3010	National Airspace, Air Traffic Control, and Airport Administration	Major admission and 40 credit hours completed	3
AV 3120	Aviation Law	Major admission and 40 credit hours completed	3
Elective			6
	Semester total:		15

Spring of Third Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 4710	Crew Resource Management (CI)	AV 1100, AV 2330, ENGL 2010	3
AV 4280	Aviation Management		3
AV 4300	History of Aviation in America	40 credit hours completed	3
Elective			6
	Semester total:		15
Fall of Fourth Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 4490	Human Factors in Aviation Safety	Major admission and 40 credit hours completed	3
AV 5500	Airline Transport Pilot (ATP) Ground School (QI)	60 credit hours completed	4
MSLE 3110	Managing Organizations and People (DSS)	40 credit hours completed	3
Elective	Upper Division Directed Elect		3
Elective			2
	Semester total:		15
Spring of Fourth Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 4720	Aviation Safety and Security (CI)		3
AV 5130	Airport Management		3
DHA			3
Elective	Upper-Division Directed Elective		6
	Semester total:		15
	DEGREE TOTAL:		120

Aviation Management – Unmanned Aerial Systems Emphasis

Fall of First Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 1100	The Aviation Profession		1
AV 1130	Flight Principles		3
AV 2330	Private Pilot Ground School		4
ENGL 1010	Introduction to Writing: Academic Prose (CL1)		3
MATH 1050 or QL course	College Algebra (QL)		4
	Semester total:		15
Spring of First Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
BAI			3
AV 2520	Instrument Pilot Ground School		4
ENVS 1350	Introduction to Environmental Science (BLS)		3
MATH 1060	Trigonometry		2
BUSN 1111	Introduction to Accounting		3
	Semester total:		15
Fall of Second Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 3010	National Airspace, Air Traffic Control, and Airport Administration	Major admission and 40 credit hours completed	3
PSC 2040	Aviation Weather		3
ENGL 2010	Intermediate Writing: Research Writing in a Persuasive Mode (CL2)	CL1	3
BUSN 2010	Accounting II		3
BHU			3
	Semester total:		15

Spring of Second Year (Course Prefix and Number)	Course Title		Credit Hours
AV 2160	Aircraft Systems for the Professional Pilot		3
AV 2400	Commercial Ground School		2
PHYS 1800	Physics of Technology (BPS)		4
AV 3500	Introduction to Unmanned Aerial Systems		3
BUSN 1010	Business Principles		3
	Semester total:		15
Fall of Third Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
ASTE 3050	Technical and Professional Communications Principles (CI)	CL2	3
AV 4490	Human Factors in Aviation Safety	Major admission and 40 credit hours completed	3
AV 3520	UAS: Sensors, Guidance and Control	AV 3500, AV 3505 and Instructor approval with a Part 107 Remote Pilot Certificate	3
AV 3510	UAS: Design, Construction & Maintenance	AV 3500, AV 3505, and remote pilot certificate with instructor approval	3
JCOM 2300	Introduction to Public Relations		3
	Semester total:		15

Spring of Third Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
AV 4280	Aviation Management	Major admission and 40 credit hours completed	3
AV 3560	UAS Aerial Photography	AV 3500, AV 3505 and instructor approval with part 107 remote pilot certificate	3
AV 3120	Aviation Law	Major admission and 40 credit hours completed	3
AV 3550	UAS Advanced Design & Construction	AV 3500, AV 3505, and instructor approval with Part 107 remote pilot license	3
Elective			3
	Semester total:		15
Fall of Fourth Year (Course Prefix and Number)	Course Title	Prerequisite	Credit Hours
DHA			3
AV 5130	Airport Management		3
AV 4710	Crew Resource Management (CI)	AV 1100, AV 2330, ENGL 2010	3
AV 3535	UAS Flight Lab		3
Elective			3
	Semester total:		15

Spring of Fourth Year (Course Prefix and Number)	Course Title		Credit Hours
AV 5500	Airline Transport Pilot (ATP) Ground School (QI)	AV 2540, AV 2670 and 60 credit hours	4
AV 4300	History of Aviation in America	40 credit hours completed	3
AV 4660	Flight Senior Project (CI)	60 credit hours completed	3
Elective			4
	Semester total:		14
	DEGREE TOTAL:		120

Section V: Institution, Faculty, and Staff Support

Institutional Readiness

How do existing administrative structures support the proposed program? Identify new organizational structures that may be needed to deliver the program. Will the proposed program impact the delivery of undergraduate and/or lower-division education? If yes, how?

Utah State University recently created a new department to focus upon aviation and technical education. The new department encompasses the Aviation program, stackable programs (General Technology AAS and Technology Systems BS) and the Career and Technical Education (CTE) program areas primarily concentrated in Southeast Utah. This new degree option will augment the growth of the aviation program.

The new emphasis areas of Unmanned Aerial Systems and Aviation Operations will expand on the current UAS minor and existing coursework with existing faculty, staff, and adjunct instructors. Two new courses may require adjustment of current course assignments and the addition of additional adjunct instructors as the degree matures. There will be no degradation of existing courses or programs in the aviation department with the addition of this new degree.

Both of these emphasis areas are designed for face-to-face courses and will utilize current CANVAS and university facilities. Although not required, future dedicated UAS lab space has been requested to enhance current and future course offerings. The current UAS minor utilizes two undergraduate flight lab assistants.

Faculty

Describe faculty development activities that will support this program. Will existing faculty/instructors, including teaching/graduate assistants, be sufficient to instruct the program or will additional faculty be recruited? If needed, provide plans and resources to secure qualified faculty.

The Aviation program currently has seven full-time faculty holding FAA credentials of Airline Transport Pilot, Commercial Pilot, Certified Flight Instructor Instrument, Airframe and Powerplant Certificate and Remote Pilot Certificate. Academic

credentials include a PhD candidate, Master of Aviation Science, MS and BS degrees in Aviation. The drone program currently relies heavily upon adjunct instructors and a new faculty position has been requested by CAAS in Spring 2020 to support the UAS area. The drone minor had 138 enrollments in Fall 2019 and the new major is expected to enroll 15 students the first year and 25 additional students the second year. All aviation faculty members receive the same support and training from the Center for Innovation, Design and Instruction (CIDI), as well as invitations to attend our annual conferences, monthly workshops and seminars.

Part I. Department Faculty/Staff

Identify # of department faculty / staff (headcount) for the year preceding implementation of proposed program.

	# Tenured	# Tenure -Track	# Non - Tenure
Faculty: Full Time with Doctorate	1	0	0
Faculty: Part Time with Doctorate	0	0	0
Faculty: Full Time with Masters	0	0	4
Faculty: Part Time with Masters	0	0	1
Faculty: Full Time with Baccalaureate	0	0	2
Faculty: Part Time with Baccalaureate	0	0	0
Teaching / Graduate Assistants	0	0	2
Staff: Full Time	0	0	1
Staff: Part Time	0	0	2

Part II. Proposed Program Faculty Profiles

List current faculty within the institution -- with academic qualifications -- to be used in support of the proposed program(s).

First Name	Last Name	Tenure (T) / Tenure Track (TT) / Other	Degree	Institution where Credential was Earned	Est. % of time faculty member will dedicate to proposed program.	If "Other" describe
Full Time Faculty						
Andreas	Wesemann	Other	MAS	Embry-Riddle Aeronautical University	30	Professional Practice
Randy	Chesley	Other	B.S.	Utah State University	10	Professional Practice
Matt	Bunnell	Other	M.S.	Utah State University	20	Professional Practice
Kent	King	Other	MAS.	Utah State University	10	Professional Practice
Christopher	Bracken	Other	B.S.	Utah State University	20	Professional Practice
Miller	Bruce	T	PhD	Iowa State University	20	

Mikhail	Maxfield	Other	MAS	Utah State University	20	Professional Practice
Part Time Faculty						

Part III: New Faculty / Staff Projections for Proposed Program

Indicate the number of faculty / staff to be hired in the first three years of the program, if applicable. Include additional cost for these faculty / staff members in Financial Table Below.

	# Tenured	# Tenure - Track	# Non - Tenure Track	Academic or Industry Credentials Needed	Est. % of time to be dedicated to proposed program.
Faculty: Full Time with Doctorate					
Faculty: Part Time with Doctorate					
Faculty: Full Time with Masters					
Faculty: Part Time with Masters					
Faculty: Full Time with Baccalaureate					
Faculty: Part Time with Baccalaureate	0	0	1	Aviation Degree with FAA Credentials; UAS Experience	100
Teaching / Graduate Assistants					
Staff: Full Time					
Staff: Part Time					

Staff

Describe the staff development activities that will support this program. Will existing staff such as administrative, secretarial/ clerical, laboratory aides, advisors, be sufficient to support the program or will additional staff need to be hired? Provide plans and resources to secure qualified staff, as needed.

The current support staff for the new division will be utilized to support the new degree. No new staff will be required upon this approval.

Student Advisement

Describe how students in the proposed program will be advised.

Students in the new degree will be incorporated with existing students into our aviation advising support staff which includes an academic advisor and two aviation peers. The advising for the College's programs is overseen by the Associate Dean for Academic Programs and affiliated with the College's Student Services Center. These three individuals meet with each prospective and current student to create a degree plan that complies with all USU graduation and major requirements. Advisor and peers are available by email and teleconference as well as in person with office hours in the Industrial Science building during office hours.

Library and Information Resources

Describe library resources required to offer the proposed program if any. List new library resources to be acquired.

No changes to current library support will be required. USU's library staff maintains a selection of current textbooks and required reading for students to utilize.

Physical Facilities and Equipment

Describe any additional physical facilities and equipment needed, and plans to procure new facilities and equipment.

The new Aviation Management – Unmanned Aerial Systems emphasis area can begin without any major changes. The department has requested additional laboratory space for UAS instruction through the College's Space Committee. Connections with industry and the addition of specialized courses will require additional equipment and labs, supported by donations and course fees. Education grants and other avenues will be sought to support this new area.

Projected Enrollment and Finance

Part I.

Project the number of students who will be attracted to the proposed program as well as increased expenses, if any. Include new faculty & staff as described above.

The student data in the table below is based upon our projections related to enrollment in the Aviation program. Departmental financial data is from the School of Applied Sciences Technology and Education. Please note that the Aviation and Technical Education Department is in the process of being split out of the School of Applied Sciences, Technology, and Education.

Three Year Projection: Program Participation and Department Budget						
	Year Preceding Implementation	New Program				
		Year 1	Year 2	Year 3	Year 4	Year 5
Student Data						
# of Majors in Department	410	450	480	500	525	525
# of Majors in Proposed Program(s)		25	55	75	100	100
# of Graduates from Department	49	54	64	85	95	95
# Graduates in New Program(s)				25	30	40

Department Financial Data				
<i>Project additional expenses associated with offering new program(s). Account for New Faculty as stated in above in, "Faculty Projections."</i>	Department Budget			
	Year Preceding Implementation (Base Budget)	Year 1	Year 2	Year 3
		Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)
EXPENSES – nature of additional costs required for proposed program(s)				
<i>List salary benefits for additional faculty/staff each year the positions will be filled. For example, if hiring faculty in year 2, include expense in years 2 and 3. List one-time operating expenses only in the year expended.</i>				
Personnel (Faculty & Staff Salary & Benefits)	\$174,527	\$178,017	\$272,267	\$277,712
Operating Expenses (equipment, travel, resources)	\$10,000	\$10,000	\$10,000	\$10,000
Other:				
TOTAL PROGRAM EXPENSES		\$188,017	\$282,267	\$287,712
TOTAL EXPENSES	\$184,527	\$188,017	\$282,267	\$287,712
FUNDING – source of funding to cover additional costs generated by proposed program(s)				
<i>Describe internal reallocation using Narrative 1 on the following page. Describe new sources of funding using Narrative 2.</i>				
Internal Reallocation	\$184,527	\$94,250		
Appropriation				
Special Legislative Appropriation				
Grants and Contracts				
Special Fees				
Tuition				
Differential Tuition (requires Regents approval)				
PROPOSED PROGRAM FUNDING		\$282,267	\$282,267	\$287,712
TOTAL DEPARTMENT FUNDING	\$5,837,199	\$5,931,449	\$6,050,077	\$6,171,079
Difference				
Funding - Expense	\$0	\$0	\$0	\$0

Part II: Expense explanation

Expense Narrative

Describe expenses associated with the proposed program.

Primary expense related to this degree program is the faculty time to absorb additional students. As most courses are currently being taught, maximizing instructor effectiveness will absorb additional students into classes. Current teaching loads will be apportioned to initially absorb the courses and responsibilities within existing faculty members. Approximately \$10,000 of existing operating funds will be apportioned to assist with unique expenses associated with this degree. This accounts for the initial internal reallocation of the \$184,527. The \$94,250 reallocation has been discussed with the CAAS budget officer and the Dean to support this program and support general growth within the Aviation program.

Part III: Describe funding sources

Revenue Narrative 1

Describe what internal reallocations, if applicable, are available and any impact to existing programs or services.

Revenue Narrative 2

Describe new funding sources and plans to acquire the funds.

College of Agriculture and Applied Sciences - Landscape Architecture and Environmental Planning

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Agriculture and Applied Sciences

DEPARTMENT (include all cross listed departments)*

Landscape Architecture and Environmental Planning

Current Title (if applicable)

Proposed Title

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) * 04.0601

Minimum Number of Credits (if applicable) * 18

Maximum Number of Credits (if applicable) * 18

Type of Degree: (BA, BS, etc.) * Certificate

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☒ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☐ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☐ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)

Additional Approvals (if applicable)

Graduate Council* ☐ Yes
☒ No

Council on Teacher Education* ☐ Yes
☒ No

Section I: The Request

R401 Purpose*

This R401 is to create a new certificate program in the Department of Landscape Architecture & Environmental Planning entitled: **Advanced Design, Geospatial, and Visualization Technologies Certificate**.

Section II: Program Proposal

Proposed Action & Rationale*

It is proposed to create a new certificate program in the Landscape Architecture & Environmental Planning Department entitled: **Advanced Design, Geospatial, and Visualization Technologies Certificate**. The certificate will be offered via face-to-face courses on the Logan campus. Providing students with the opportunity to earn this certificate will encourage them to invest more time during their education in mastering important and emerging technologies in the field of landscape architecture. Students will complete courses that will help them develop a mastery of several critical technologies, including unmanned aerial systems (drones), virtual reality, advanced 3D and parametric modeling, and geospatial data analysis and visualization. It is expected that 8-12 students

modeling, and geospatial data analysis and visualization. It is expected that 6-12 students per year will earn the certificate.

Labor Market Demand (if applicable)

A recent survey of the American Society of Landscape Architects found that many of the technologies that students will learn through this certificate are being used or adopted by numerous design firms, including drones (95% of firms), virtual reality (69%), and parametric modeling (38%). Despite the prevalence of these new technologies in the work force, there is not a similar emphasis on training students in these technologies amongst landscape architecture programs across the nation. The creation of this certificate will allow LAEP to solidify its position at the forefront of technology adoption and teaching amongst national landscape architecture programs. Students who complete the certificate will graduate with an advanced skillset of the latest technologies used in the profession, substantially improving their attractiveness and hireability with design firms.

Consistency with Institutional Mission & Institutional Impact*

The proposed certificate is consistent with the mission of LAEP and USU to provide students with high quality learning outcomes that enable them to expand their capabilities and prepare them to enter the workforce. The proposed certificate will not hinder students' time to graduation and does not require changes to the LAEP curriculum. Approval to include AV 3500 in the certificate has been given by Prof. Baron Wesemann, head of the Aviation program.

Finances*

Budgets in other programs will not be impacted. Many of the classes taught in this program are already being offered in existing programs and there is verified capacity for additional students. The additional course being added to the curriculum simultaneous with the creation of the certificate is LAEP 2900, which will be incorporated into teaching loads of existing faculty.

Section III: Curriculum (if applicable)

**Program Curriculum
Narrative**

Proposed Advanced Design, Geospatial, and Visualization Technologies Certificate:

To earn the certificate, students must complete the following courses (18 credits in total)

Required courses:

LAEP 2400 – 3D Representation (3)

LAEP 2900 – VR Design and Thematics Studio (3)

LAEP 3300/6300 – GIS for Environmental Planning (4)

LAEP 3400/6400 – Advanced Geospatial Analysis and Visualization for Environmental Planning (5)

AV 3500 - Introduction to Unmanned Aerial Systems (3)

Suggested sequence:


AV 3500 – Sophomore Fall

LAEP 2400 – Junior Fall

LAEP 3300/6300 – Junior Fall


LAEP 3400/6400 – Junior Spring

LAEP 2900 – Senior Spring

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

College of Agriculture and Applied Sciences - Landscape Architecture and Environmental Planning

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Agriculture and Applied Sciences

DEPARTMENT (include all cross listed departments)*

Landscape Architecture and Environmental Planning

Current Title (if applicable) Masters of Bioregional Planning

Proposed Title Masters of Environmental Planning

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) * 04.0601

Minimum Number of Credits (if applicable) * 41

Maximum Number of Credits (if applicable) * 90

Type of Degree: (BA, MS, BS, etc.) *

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☐ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☐ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☒ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)

Additional Approvals (if applicable)**Graduate Council***

- ☐ Yes
- ☒ No

Council on Teacher Education*

- ☐ Yes
- ☒ No

Section I: The Request**R401 Purpose***

Change the name from Master's of Bioregional Planning to Master's of Environmental Planning.

Section II: Program Proposal**Proposed Action & Rationale***

The Department of Landscape Architecture & Environmental Planning would like to change the degree name from Master's of Bioregional Planning to Master's of Environmental Planning. It is believed this name change will lead to better recruiting of premier students.

Labor Market Demand (if applicable)

**Consistency with
Institutional Mission
& Institutional
Impact***


The program name change will lead to USU being able to better facilitate teaching to top-ranked students through better recruiting initiatives.

Finances*

It is believed the name change will lead to increased revenue within the department as more students will apply for the available master's degree.


Section III: Curriculum (if applicable)

**Program Curriculum
Narrative**

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

Michele Hillard

From: Richard Inouye
Sent: Wednesday, March 25, 2020 2:51 PM
To: Sean Michael; Michele Hillard
Subject: Re: LAEP PhD name change

Yes – good on both changes.

Richard S. Inouye
Vice Provost
School of Graduate Studies

[Feedback on how we're doing?](#)



1450 Old Main Hill
Logan, UT 84322-1450
Phone: (435) 797-3981
richard.inouye@usu.edu

From: Sean Michael <Sean.michael@usu.edu>
Date: Wednesday, March 25, 2020 at 2:39 PM
To: Richard Inouye <richard.inouye@usu.edu>, Michele Hillard <michele.hillard@usu.edu>
Subject: Re: LAEP PhD name change

Richard, after we hung up, I listened to Michele's voice message, which tried to catch me about the other degree name change LAEP submitted.

The other we need to have reviewed by EPC (and thus be on tomorrow's agenda Michele will send) and reach Grad Council is for our MS in Bioregional Planning to be renamed to the more nationally accepted term of MS in Environmental Planning.

If you are supportive of that name change as well could you Reply To All so that Michele knows?

Thank you both!

s

• • • • •

Sean E. Michael, Ph.D., FCELA
Dept. Head / Professor



4005 Old Main Hill • Logan, UT 84322-4005 • 435.797.0509 / .0503 F

Note: this email is intended solely for the recipient(s) to whom it is sent. The contents may not be distributed, in part or in whole, without the author's consent.

From: Richard Inouye <richard.inouye@usu.edu>

Date: Wednesday, March 25, 2020 at 2:35 PM

To: Michele Hillard <michele.hillard@usu.edu>

Cc: Sean Michael <Sean.michael@usu.edu>

Subject: LAEP PhD name change

Michele: Sean just called me about this request to change the name of the PhD program (adding '& Environmental Planning'). I'm fine with this change, and the Grad Council has given me authority to approve this type of change without taking it to the full Council.

Richard S. Inouye
Vice Provost
School of Graduate Studies

[Feedback on how we're doing?](#)



1450 Old Main Hill
Logan, UT 84322-1450
Phone: (435) 797-3981
richard.inouye@usu.edu

College of Agriculture and Applied Sciences - Landscape Architecture and Environmental Planning

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Agriculture and Applied Sciences

DEPARTMENT (include all cross listed departments)*

Landscape Architecture and Environmental Planning

Current Title (if applicable) PhD in Landscape Architecture

Proposed Title PhD in Landscape Architecture and Environmental Planning

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) 04.0601*

Minimum Number of Credits (if applicable)* 60

Maximum Number of Credits (if applicable)* 90

Type of Degree: (BA, PhD, BS, etc.)*

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☐ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☐ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☒ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)**Additional Approvals (if applicable)****Graduate Council***

- ☐ Yes
- ☒ No

Council on Teacher Education*

- ☐ Yes
- ☒ No

Section I: The Request**R401 Purpose***

The Department of Landscape Architecture & Environmental Planning would like to rename it's PhD from Landscape Architecture to Landscape Architecture & Environmental Planning.

Section II: Program Proposal**Proposed Action & Rationale***

It is believed that by adding environmental planning to the PhD title, students from an increased number of disciplines will be interested in attending graduate school at LAEP.

Labor Market Demand (if applicable)**Consistency with Institutional Mission**

The potential for increased recruitment due to the program title change will prospectively

**Instructional Mission
& Institutional
Impact***


expand the number, diversity and inclusiveness of student applicants.

Finances*

More students will enroll within the PhD program with the expanded title. This will generate more revenue into the department.


Section III: Curriculum (if applicable)

**Program Curriculum
Narrative**

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

Michele Hillard

From: Richard Inouye
Sent: Wednesday, March 25, 2020 2:35 PM
To: Michele Hillard
Cc: Sean Michael
Subject: LAEP PhD name change

Michele: Sean just called me about this request to change the name of the PhD program (adding '& Environmental Planning'). I'm fine with this change, and the Grad Council has given me authority to approve this type of change without taking it to the full Council.

Richard S. Inouye
Vice Provost
School of Graduate Studies

[Feedback on how we're doing?](#)



1450 Old Main Hill
Logan, UT 84322-1450
Phone: (435) 797-3981
richard.inouye@usu.edu

College of Humanities and Social Sciences - Languages, Philosophy and Communication Studies

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all cross listed colleges)*

College of Humanities and Social Sciences

DEPARTMENT (include all cross listed departments)*

Languages, Philosophy and Communication Studies

Current Title (if applicable)

Proposed Title Nonprofit Organizations and Social Entrepreneurship

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) 09.0901*

Minimum Number of Credits (if applicable)* 19

Maximum Number of Credits (if applicable)* 29

Type of Degree: (BA, BS, etc.)* Certificate of Proficiency

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☒ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☐ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☐ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)

Additional Approvals (if applicable)

Graduate Council* ☐ Yes
☒ No

Council on Teacher Education* ☐ Yes
☒ No

Section I: The Request**R401 Purpose***

We are requesting permission to create a Certificate of Proficiency in Nonprofit Organizations and Social Entrepreneurship. The proposal uses existing courses and faculty across a number of departments and colleges and develops a certificate that will enhance job prospects for students in any major.

Section II: Program Proposal

Proposed Action & Rationale*

The USU website lists 120 different majors/undergraduate emphases that students can choose from. Of those 120 majors, 28 of them specifically state under their career options that the material taught in these majors will prepare and qualify individuals to pursue professions/careers in humanitarian efforts and nonprofit organizations. Despite these statements, there is no curricular or programmatic route to help students understand how the nonprofit sector works or make sense of their coursework in this context. As a result, many students are left to make these connections on their own. A Certificate of Proficiency in Nonprofit Organizations and Social Entrepreneurship will be a considerable resource to students who have this career focus. Additionally, it will provide a formal acknowledgement and validation for students who need to differentiate themselves from other job applicants. Faculty and advisors across campus have expressed support for this certificate as it will fulfill the needs and desires of students across the university.

Labor Market Demand (if applicable)

Currently, there are over 1.56 million nonprofit organizations in the United States, with many more operating around the world. The nonprofit sector contributes more than \$985.4 billion to the US economy and provides over 12.3 million jobs each year. In the past five years, Utah's nonprofit sector has skyrocketed by 50 percent, with an estimated 10,000 nonprofit organizations. Currently, Utah is ranked first in the nation for charitable giving and volunteer efforts. Given this significant increase in labor market demand for nonprofit organizations throughout the country, and especially in the state of Utah, it seems appropriate to develop and offer a course of study that prepares students to enter and be more successful in nonprofit careers and social programs within businesses. Many USU graduates work in nonprofits or social/philanthropic business programs, and a certificate program that compliments all majors would help them in their efforts to do this kind of work.

Consistency with Institutional Mission & Institutional Impact*

The mission of Utah State University is to be a "premier student-centered land-grant and space-grant university". In order to accomplish this goal, the university emphasizes that academics come first and places importance on cultivating diversity of thought and culture and by serving the public through learning, discovery, and engagement. The Nonprofit Organizations and Social Entrepreneurship certificate of proficiency is consistent with the mission of Utah State by offering a program for students that focuses on improving the common good through various types of organizations and practices. Such a program focuses on understanding and engaging with diverse people and cultures in the pursuit of common goals.

Finances*

This certificate of proficiency will be created using existing courses across a number of departments and colleges. No new financial resources are needed.

Section III: Curriculum (if applicable)


**Program Curriculum
Narrative**

This certificate of proficiency will be housed and administered in the College of Humanities and Social Sciences and the Department of Languages, Philosophy, and Communication Studies. However, it will incorporate classes from across CHaSS as well as other colleges to give maximum flexibility to students from a variety of programs.

The certificate will have a core of required classes. These classes will cover theory and practices of nonprofit organizations and social entrepreneurship, philanthropy and development, social media, and grant writing – all foundational areas for nonprofit work. This certificate will also require an internship within a student's declared major, minor, or college. Students will then be able to choose a group of classes in specific interest areas, including business/entrepreneurship, global communication, social media and technical communication, social work, sociology, sustainability, and community-based education. Students can select a group of classes from one of these areas, or they can choose any collection of courses from the various programs. See the attached program curriculum for details.


The idea behind this structure is that many programs talk about preparing students for nonprofit work. Therefore, a student in entrepreneurship or environmental science can use their relevant coursework and add the core classes to it. On the other hand, a student who hasn't chosen a major yet but wants to pursue this certificate can do the core and then explore coursework in a variety of programs that are connected to it. Thus, students in majors and those still looking for one can use this certificate as a way to focus their studies.

In developing the program curriculum for this certificate of proficiency, we have worked with and received support and approval from the Associate Deans in Business (Merideth Thompson), Natural Resources (Claudia Radel), Agriculture and Applied Sciences (Brian Warnick) and Humanities and Social Sciences (Matt Sanders), along with the various department heads and program coordinators within these colleges.

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

S.J. and Jessie E. Quinney College of Natural Resources - Environment and Society

4.1.a R401 Abbreviated Program Proposal

Proposal Information

Instructions for Completing R401:

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

Contact Information

Paul Barr: Vice Provost (797-0718)

Step 1: Turn on "Help Tips" by clicking on the Show Help TextPrint icon (*small blue circle with i inside*) at the top right-hand side of your proposal.

Step 2: Select the College and Department Involved in the Process to Ensure the Correct Workflow and Approval.

Select the College(s) this proposal involves.

Select the Department(s) this proposal involves.

COLLEGE (include all
cross listed
colleges)*

S.J. and Jessie E. Quinney College of Natural Resources

DEPARTMENT
(include all cross
listed
departments)*

Environment and Society

Current Title (if
applicable)

Proposed Title Applied Geographic Information Science Certificate

Step 3: Enter the Correct CIP Code Using the Following Website: [Classification Instructional Programs](#)

CIP Code (6-digits) 45.0702 *

Minimum Number of Credits (if applicable) * 16

Maximum Number of Credits (if applicable) * 19

Type of Degree: (BA, BS, etc.) * Certificate of Proficiency

Request

Step 4: Select the Type of Change Being Requested.

- New Programs:**
- ☒ New Certificates of Proficiency (except Institutional Certificates of Proficiency)
 - ☐ New Certificates of Completion
 - ☐ New Post-Baccalaureate and Post-Masters Certificates
 - ☐ New Minors
 - ☐ New Emphases within an Approved Degree
 - ☐ New K-12 Endorsements
 - ☐ Other

- Existing Program Changes:**
- ☐ Program Transfer
 - ☐ Program Restructure
 - ☐ Program Consolidation
 - ☐ Program Suspension
 - ☐ Program Discontinuation
 - ☐ Program Name Change
 - ☐ Out-of-Service Area Delivery of a Program
 - ☐ Reinstatement of a Previously Suspended Program
 - ☐ Other

Administrative Unit Changes:

- ☐ New Administrative Units
- ☐ Administrative Unit Transfer
- ☐ Administrative Unit Restructure
- ☐ Administrative Unit Consolidation
- ☐ Reinstatement of Previously Suspended Administrative Units
- ☐ Other

Creation of Non-Administrative Units:

- ☐ New Center
- ☐ New Institute
- ☐ New Bureau
- ☐ Other

Other: (explain change)

Additional Approvals (if applicable)

Graduate Council*

- ☐ Yes
- ☒ No

Council on Teacher Education*

- ☐ Yes
- ☒ No

Section I: The Request

R401 Purpose*

This R401 is to create a new undergraduate certificate program in the Department of Environment and Society entitled: **Applied Geographic Information Science Certificate.**

Section II: Program Proposal

**Proposed Action &
Rationale***

The Department of Environment and Society proposes a new certificate of proficiency in **Applied Geographic Information Science, or Applied GIS**. The certificate will be offered largely via face-to-face courses on the Logan campus, although some of the courses may be delivered with an online course option. If feasible in the future, the Department will also offer the certificate via online and broadcast courses. The certificate program will be open to all USU undergraduate students.

Earning this certificate will allow students to complement their education in a variety of fields with cutting-edge and marketable skills in geospatial analysis and geographic information systems. The courses included as part of this certificate provide training in computational geospatial analysis and programming. Additionally, through elective offerings, students will build skills in complementary topic areas including unmanned aerial systems, geo-visualization, and surveying/geomatics. It is anticipated that 15-20 undergraduate students per year will complete this certificate.

**Labor Market
Demand (if
applicable)**

Careers that use geographic information science (GIS) and geospatial analysis are found in numerous sectors, including the physical, biological, and social sciences. GIS is widely used in urban and rural planning and landscape management by municipalities, along with nearly all state and federal agencies. GIS is also used within the private sector for location-related decision making. The demand for graduates with applicable GIS skills is high, and requires that students are capable of conducting advanced geoprocessing tasks and disseminating information via high-quality cartographic outputs. This certificate program is designed to develop students' skills in GIS beyond those required for their particular major field. By completing this certificate program, students will be equipped with a skillset that will qualify them for positions throughout the public and private sectors. According to the Utah Department of Workforce Services, GIS technicians (falling under the umbrella category of "all other computer occupations") earn a median income in Utah of \$73,370, with 120 openings projected annually within the state. Additionally, in offering this certificate, USU will be more closely aligned and competitive with peer institutions' curricula, as numerous universities across the U.S. are already offering analogous programs. Almost all other USHE institutions offer equivalent undergraduate certificates in a variety of forms. The University of Utah offers a Geographic Information Science Certificate. Utah Valley University, Southern Utah University, and Snow College offer certificates in Geographic Information Systems. Weber State offers a Geospatial Analysis Certificate. Salt Lake Community College offers both a Geographic Information Systems Certificate and a Geospatial Technology Certificate.

**Consistency with
Institutional Mission
& Institutional
Impact***

It is USU's mission to serve the public through learning, discovery, and engagement. In addition, the Quinney College of Natural Resources strives to produce effective future leaders in both research and management arenas for the fields of natural resources and the environmental sciences. This certificate is responsive to both the University and College missions, in that students who complete this program will be equipped to use geospatial analytical techniques to understand and communicate societally-relevant spatial information. This certificate program will not extend students' time to graduation, nor will it require changes to existing curriculum. The certificate program of study represents collaboration among the three departments of the Quinney College of Natural Resources, with one department (Department of Environment and Society) serving as the housing unit. Approval for the inclusion of courses outside the College of Natural Resources has been obtained from the relevant department heads (see course listing below).

Finances*

Budgets in other units should not be impacted. All required courses for the certificate (with the exception of a new 1-credit portfolio course) are already offered at USU, and it is anticipated that the numbers of additional students will not necessitate the delivery of additional course sections. Advising will be provided through the Quinney College of Natural Resources' Academic Services Center. Dr. Alan Kasprak, Coordinator of the Utah Geospatial Consortium, with a position in the Department of Environment and Society, will provide program administrative support and serve as instructor for the 1-credit portfolio course.

Section III: Curriculum (if applicable)

**Program Curriculum
Narrative**

This certificate requires the completion of a minimum of 16 credits, all with a grade of C- or better. Coursework consists of two required 3-credit courses (an introductory GIS course and an advanced GIS course), one 3-credit course in one of two common GIS programming languages (Python or R), and two 3- to 5-credit elective courses selected from a list of options. Courses on the electives list provide complementary skills in geospatial analysis, data visualization, or geospatial technologies, including remote sensing or surveying. A new 1-credit course will allow students to be mentored in creating a web-based portfolio, building on coursework completed in the three required core courses. The portfolio will be composed of products, at a minimum, from the three required courses. This portfolio will serve as a demonstration of learning in GIS and provide a demonstration of GIS skills to potential future employers. The certificate is designed to be easily completed in either a single academic year or in two academic years, to be more easily completed alongside a variety of majors.

Program of Study:

Required GIS core courses (10 credits)

Students will complete all of the following:

GEOG 1800 or WILD 1800: Introduction to Geographic Information Sciences (3)
(Equivalent introductory GIS courses will be considered in lieu of GEOG 1800 or WILD 1800)

WATS 4930: Advanced GIS and Spatial Analysis (3)

GEOG 4910: GIS Portfolio (1)

Students will complete one of the following two GIS programming course options:

ENVS 4950: Special Topics: Python Programming (3)

GEOG 4870: Geospatial Analysis (3)

Elective courses (6-9 credits)

Students will complete at least two of the following:

ENVS 4950: Special Topics: Python Programming [if not taken above] (3)

GEOG 4870: Geospatial Analysis with R [if not taken above] (3)

WILD 5750: Applied Remote Sensing (3)

GEOG 3800: Data Visualization (3)

PSC/CEE 5003: Remote Sensing of Land Surfaces (4)

AV 3500: Introduction to Unmanned Aerial Systems (3)

CEE 2240: Engineering Surveying (3)

LAEP 3400: Advanced Geospatial Analysis and Visualization for Environmental Planning (5) OR LAEP 4900: Special Problems: Advanced Geospatial Analysis and Visualization for

Proposed Course Sequence for Certificate Completion:


GEOG 1800 or WILD 1800: Fall Semester Year 1

WATS 4930: Spring Semester Year 1

ENVS 4950 or GEOG 4870: Spring Semester Year 1


GEOG 4910: Final semester, following or coterminous with core GIS courses

Elective courses: Fall or Spring Semester Year 1 or Year 2

Step 5: Attach (if applicable) completed Program Curriculum and Degree Map to this request by clicking on the Files  icon located in the upper left-hand corner of the Proposal Toolbox.

Step 6: Submit

Click on the save all changes button below.

Scroll to the top left and click on the launch  icon to launch your proposal.

Award Name	Award Type	Credit Hours	CIP
Music (Minor)	Minor	21	50.0901 Music, General.
Elementary School Music Teaching (Minor)	Minor	19	13.1312 Music Teacher Education. (was 50.0901)
Music Studies (Minor)	Minor	18	50.0901 Music, General.
Music Therapy	BS	120	51.2305 Music Therapy/Therapist.
Music (BA)	BA	120	50.1001 Arts, Entertainment, and Media Management, General.
Music - Guitar Performance (BM)	BM	120	50.0901 Music, General.
Music - Harp Performance (BM)	BM	120	50.0901 Music, General.
Music - Music Education, Band (BM)	BM	120	13.1312 Music Teacher Education. (was 50.0901)
Music - Music Education, Choral (BM)	BM	120	13.1312 Music Teacher Education. (was 50.0901)
Music - Music Education, Guitar (BM)	BM	120	13.1312 Music Teacher Education. (was 50.0901)
Music - Music Education, Orchestra (BM)	BM	120	13.1312 Music Teacher Education. (was 50.0901)
Music - Organ Performance (BM)	BM	120	deactivating
Music - Piano Pedagogy (BM)	BM	120	50.0901 Music, General.
Music - Piano Performance (BM)	BM	120	50.0901 Music, General.
Music - String Performance (BM)	BM	120	50.0901 Music, General.
Music - Vocal Performance (BM)	BM	120	50.0901 Music, General.
Music - Wind/Bass/Percussion (BM)	BM	120	50.0901 Music, General.
Music - Guitar Performance Specialization (MM)	MM	30	50.0901 Music, General. (was 13.1312)
Music - Piano Performance and Pedagogy Specialization (MM)	MM	36	50.0901 Music, General.
Music - Voice Performance Specialization (MM)	MM	32	50.0901 Music, General.
Music - Choral Conducting Specialization (MM)	MM	30	50.0901 Music, General.